

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/013496 A3

(51) International Patent Classification⁷: **H01Q 21/00**,
11/12

(21) International Application Number:
PCT/US2004/023704

(22) International Filing Date: 23 July 2004 (23.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/489,934 25 July 2003 (25.07.2003) US

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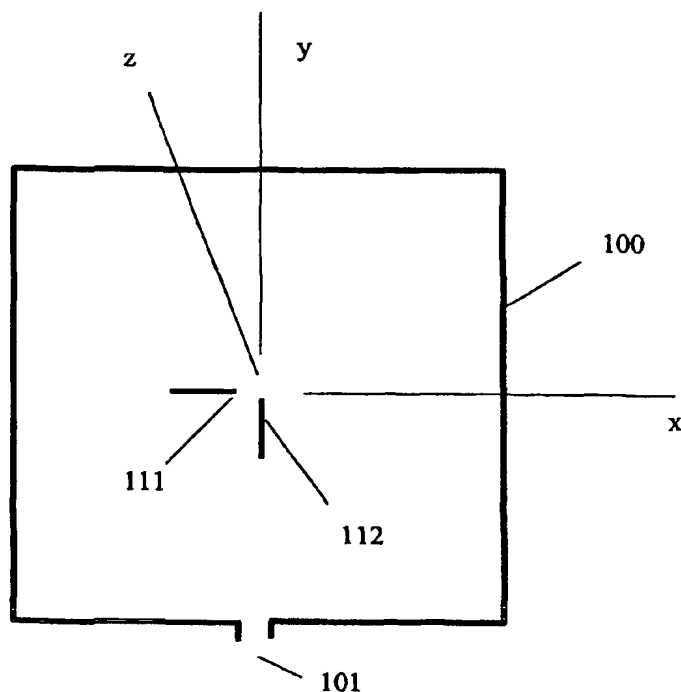
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

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(54) Title: APPARATUS FOR AND METHOD OF USING A DIVERSITY ANTENNA



Reader Antenna in X-Y Plane,
Tag in Plane Orthogonal to X-Y Plane

(57) Abstract: In accordance with a preferred embodiment of the invention, an antenna structure is provided having one or more antennae (100) arranged so as to read all possible orientations of a randomly placed tag (111, 112). Also provided in accordance with a preferred embodiment of the invention, is a method of configuring one or more antennae composed of the steps of: identifying the "dead zones" of each discrete antennae used, and orienting each antennae such that there are no "dead zones" common to all antennae. The unique antenna structure (and corresponding method) has particular application in tag reader antenna systems for use in RFID (radio frequency identification) applications (13.56 MHz) and the like. In accordance with an exemplary embodiment, multiple RF (radio frequency) antennae are utilized as part of an intelligent station to track items tagged with radio frequency identification (RFID) tags.



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

(88) **Date of publication of the international search report:**

9 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.